

Amendments to the Specification

Please amend paragraph 44 as follows:

-- Figs. 3A-F illustrates an alternative embodiment of a method of forming tall flip chip bumps according to the present invention. The alternative method utilizes the same steps as shown in Figs. 2A-D to provide a semiconductor wafer having a photoresist layer 40 deposited thereon with an opening therein down to the UBM 38 overlying a contact pad 36 of the semiconductor wafer 30. A first electrically conductive material 44 is deposited into the opening in the photoresist 40 and a second electrically conductive material 46 is electroplated over the first electrically conductive material 44 to provide the device shown in and described above with respect to Fig. 2D. Thereafter, a flux agent 50 is deposited over the second electrically conductive material 46 as shown in Fig. 3A. Again, ~~and~~ the semiconductor device 30 is hard baked to remove any oxide that may be on the surface of the second electrically conductive material 46 (Fig. 3B). The hard bake temperature ranges from about 120-140° C. Because the photoresist layer 40 is still present over the semiconductor wafer 38, the hard baking step makes the subsequent removal of the photoresist layer more difficult. However, leaving the photoresist on during the hard bake results in a more uniform height of the bumps on the wafer.

A/ Alternatively, with the photoresist layer 40 still on the semiconductor wafer 30, the semiconductor wafer may be soft baked at a temperature ranging from about 90-100° C to remove any oxide on a second electrically conductive material 46. The photoresist layer 40 is removed by etching as shown in Fig. 3C and any excess UBM 38 is also removed by etching. A portion of the semiconductor wafer 30 is dipped in an electroplating solution 52 in the same

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cont.* manner as indicated in the other embodiment of the invention (Fig. 3G). The semiconductor wafer 30 is removed from the electroless plating solution 52 to provide a third electrically conductive material 54 deposited on a second electrically conductive material 46. The electrically conductive materials 44, 46 and 54 are heated to reflow the same and form a bump 58 of improved height on the semiconductor wafer 30. Again, an increase in bump height of about 3-10 micrometers or 10 percent is accomplished according to the present invention as indicated by arrows A-A in Fig. 3F/
